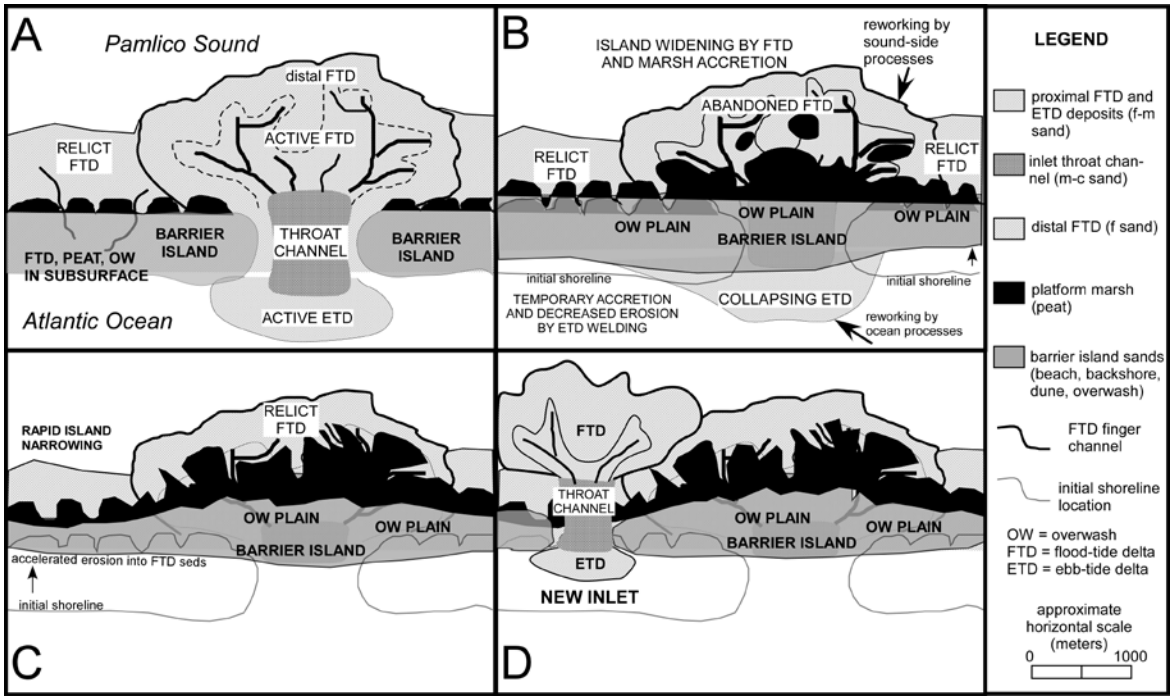


**Figure 3.** An illustration of a sequential model of barrier island evolution in response to shoreline recession and inlet formation. A) Active flood- and ebb-tide deltas (FTD and ETD, respectively) form in association with an inlet. B) As the inlet closes, the ETD collapses, causing temporary and localized shoreline accretion, while adjacent areas continue to erode; the FTD is abandoned, and a platform marsh and marsh islands develop on FTD shoals, increasing the island width. C) Continued shoreline erosion narrows the island more rapidly in areas underlain by fine FTD sediments while slower erosion occurs where coarse sands associated with the inlet throat channel occur. D) The narrow portion of the island breaches during a storm and cross-island flow and down-cutting create a new inlet. Erosion accelerates in adjacent areas underlain by fine FTD sediment, continuing the evolutionary succession.

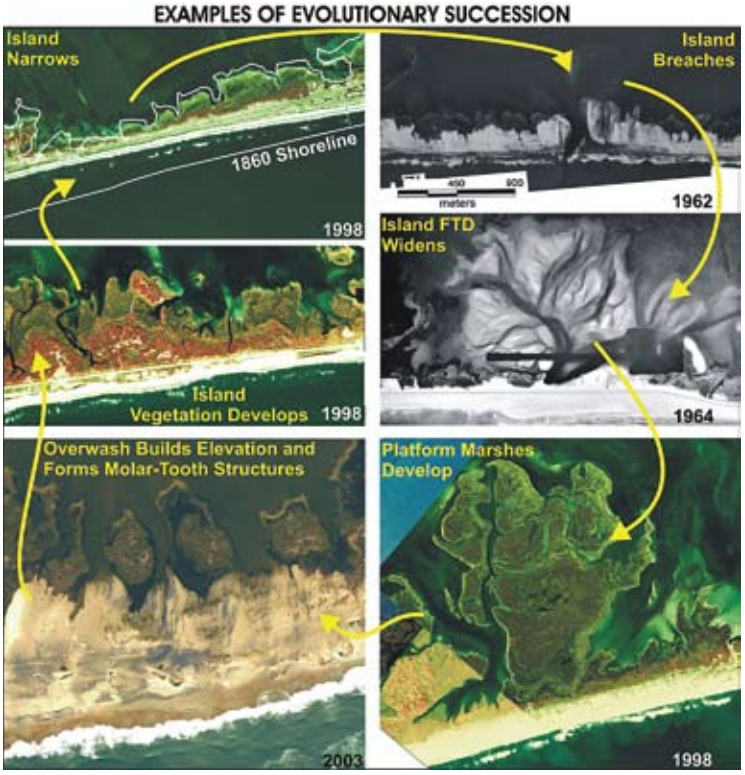


**Figure 4.** Aerial photographs of various regions of the Outer Banks showing different successional stages within the spectrum of inlet and barrier island evolution (CIR DOQQ from NC State Database; black and white aerial photographs from NPS Archives at Cape Hatteras National Seashore Manteo).